

Monetary Trends

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What is the slope of the yield curve telling us?

A yield curve is a graph of interest rates for bonds that have similar risk characteristics but differing maturities. Most of the time, the yield curve is upward sloping—rates on long-term bonds are higher than rates on short-term instruments. Sometimes, however, short-term interest rates are close to, or even higher than, long-term interest rates. In those cases, the yield curve is described as flat or inverted, respectively.

A flat or inverted yield curve rings alarm bells because such a situation often precedes recessions. No one is completely certain why this occurs but there are several possibilities. First, a flat yield curve could result from tight current monetary policy, which drives up current short-term interest rates while not affecting longer-term rates much. Second, according to one theory of the yield curve, long-term rates are positively related to the market's expectation for future short-term rates. A flat or inverted yield curve might indicate that the market expects real interest rates to fall as a result of easier monetary policy and/or lower future levels of real economic activity.

Currently, yields on long-term U.S. Treasury bonds are low, compared to short-term interest rates. The figure shows the probability of recession three months ahead as estimated by two simple statistical models using the slope of the yield curve. The first model uses the 10-year Treasury yield less the three-month Treasury bill rate, while the second uses the Aaa corporate bond with 20-or-more years to maturity instead of the 10-year Treasury bond. While both yield series fit the historical data about equally well, they currently make very different forecasts. The yield curve with the 10-year Treasury bond estimates the August 2000 probability of recession to be 20 percent; the model with the Aaa bond yield produces a probability of only 10 percent.

One explanation for the difference in the forecasts is that the Treasury's debt management program, which has diminished the supply of long-term Treasury bonds, also has reduced their yield relative to those on corporate bonds. Many analysts consider the forecast from the Aaa bonds to be more reliable because of the historically unusual fall in the supply of long-term Treasury bonds. Others, however, point to changes in the corporate-bond market that might have rendered these yields unreliable, as well. The confidence one has in the forecasts from the two models depends on whether one believes that current Treasury and Aaa data are comparable to past data in similar economic conditions.

We should remember that although models based on the slope of the yield curve do fairly well relative to other macro and financial variables, their absolute forecasting ability is not great. The models failed, for example, to generate a high probability of recession before the 1990 recession. At other times, they have predicted high probabilities of recessions that never came (e.g., 1967). In addition, developments in the structure of the economy might change the relationship between the yield curve and economic activity.

—Christopher J. Neely

